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Research into the effectiveness of various approaches to reading instruction, while it has dealt with several which are promising, has been unsuccessful in establishing any one as superior. Therefore, one especially important aspect of future research should be an examination of meaningfulness and its effect on children's verbal learning. This might consider curriculum, instructional methods, and content of reading material. A study is reported which showed a significantly greater recall of high-meaningful vocabulary than of low. It is suggested that other studies might focus on meaningfulness of longer passages. This would give implications which would establish relationships between meaningfulness and achievement in beginning reading and in the reading of disadvantaged children. (MD)

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Meaningfulness: A Critical Variable in Children's Verbal Learning[1]

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[1]Paper presented at the International Reading Association, May 1, 1969, Kansas City, Kansas.

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Research in reading methodology has not been generally conclusive. It has, in fact, been disappointing. In spite of the large number of studies focusing on methods of teaching reading currently available in the literature, the fact that no one approach has been shown to be consistently superior to any other for all children has been noted by several researchers.

Bond and Dykstra (1967), for example, concluded that no one approach to the teaching of reading was distinctly superior in all situations and Wittick (1968), on the basis of his survey of reading research in recent years, concluded not only that experimental investigations in reading have been inconclusive but also that one study has often refuted another. He noted the necessity for new research designs as did Chall (1967) when she suggested the need for a close examination of the foundations upon which research in theory and practice have been built. Indeed, any examination of the literature in the field of reading instruction reveals a growing consensus that new approaches to research must be found if the current equivocal conclusions are to be in any way resolved.

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[1]Paper presented at the International Reading Association, May 1, 1969, Kansas City, Kansas.

As Gibson and Levin (1968, P. ix) noted, the basic questions have not often been treated and thus we are faced with the necessity of discovering new questions and new directions for future research. It may well be that more basic research than that provided in methodological studies is required to determine the critical variables in learning to read. It would seem expedient that researchers not demand answers to complex questions before finding solutions to simple ones (DeCecco, 1967, p. 139).

Several promising approaches appear to be worthy of investigation. One of these is a consideration of a student's cognitive style and its relationship to reading (Davis, 1969). Another is a re-examination of current ideas of content and its effect on achievement in reading. Chall (1967, p. 311) noted that too many people were making too many recommendations about content without any proof whatever. She further stated that she had come across no evidence that a certain kind of content in beginning reading programs influenced reading achievement favorably or unfavorably. It is worthy of note, however, that this is not the case in children's verbal learning where meaningfulness of material has been shown to exert a significant influence.

It is the hypothesis of this paper that one aspect of future research might profitably be concerned with an examination of meaningfulness and its effect on children's verbal learning. This may well have relevance to curricular and instructional considerations in the teaching of reading and may be a necessary first step in re-examining current ideas of the relationship of content to reading achievement. It would also appear to be an important consideration in the teaching of reading to disadvantaged children for whom the meaningfulness of the material

might well be a critical variable in learning to read.

In an attempt to examine a variable relevant to all methods of teaching reading and to all content regardless of methodology, the study reported here examined the function of meaningfulness of material in children's verbal learning. A table of meaningfulness (Mickelson, 1969) was derived from data taken from a sample of 135 nine-year-old children. One hundred twenty mass and count nouns were scaled for meaningfulness using Noble's (1952) written association method ($\bar{m} = \frac{\Sigma R}{N}$). Cross-validation of the meaningfulness indices was carried out using 48 of the nouns randomly selected and given to a sample of 204 nine-year-old subjects. A product-moment correlation coefficient of .92 was obtained between the two measures of meaningfulness for each of the nouns.

Two learning tasks, one of high-meaningfulness words, and one of low-meaningfulness items, were constructed. Control was exercised over five other variables by having the two tasks almost identical with respect to form class, list length, initial alphabetic structure, concreteness-abstractness, and inter-item associative strength. A free-learning, free-recall design was used wherein subjects were given three minutes to study the learning tasks and were asked to freely recall as many items as they could. Subjects were 64 nine-year-old pupils randomly selected from a local school district. Children were examined in their schools in every case. They were asked, however, to leave the classroom for an adjoining room (usually the library) in which testing could be carried out under uniform conditions.

A t-test of the difference between means of items recalled showed that high-meaningfulness material was learned by children more

readily than low-meaningfulness material (.01 level of confidence).

Insert Table I

about here

It is recognized that the implications of these findings for the teaching of reading are more provocative than definitive. However, because it has been shown that meaningfulness facilitates children's verbal learning, future research in beginning reading might well be focused on the effect on achievement of the meaningfulness of the material. What would be the result in beginning reading instruction, if for example, teachers were to find out from students those concepts for which <u>in fact</u> meaningfulness could be demonstrated in terms of multiple associations and begin instruction from that point rather than from a set of prescribed materials presumably suited for all children? Meaningfulness, in fact, as defined in this study, might be thought of as a basis of determining individual differences in children's verbal facility and as such, the starting point for individualizing reading instruction.

The language-experience approach would seem to have made a beginning in this regard. However, the writer is not aware of any study in which meaningfulness of content material for children has been determined as a common basis for a comparison within methods. As has been clearly indicated in the U. S. Office of Education First-Grade Reading Studies, greater variation is currently being demonstrated within methods than between methods (Bond, 1966). This often has been interpreted as

indicating that the influence of the teacher is the critical variable in beginning reading instruction. However, it may well be that the meaningfulness of the material is equally as critical. Discovering whether or not the degree of meaningfulness ($\bar{m}$) of the material results in differential achievement patterns within methods might well prove worthwhile before continued comparisons between methods are made. Certainly, in the field of reading instruction for the disadvantaged, such an approach seems not only relevant but crucial. If, in fact, the meaningfulness of the material can be shown to influence achievement in beginning reading within method, the direction of future curricular and instructional endeavours on the part of educators will be clearly defined.

The empirical data presented in this study support the hypotheses that the variable, meaningfulness, can be precisely defined and measured ($\bar{m} = \frac{\Sigma R}{N}$), that it is a relatively lawful construct, and that it significantly influences children's verbal learning when a free-study, free-recall design is used. It is suggested that these findings may have relevance as a basis for future research in beginning reading instruction. It is further suggested that such research may have particular significance for the teaching of reading to the disadvantaged child for whom the meaningfulness of the material may well prove to be a critical variable in success in reading achievement.

Table I - Summary t-test Data:

Free Learning, Free Recall, Unmixed Lists

Mean High $\bar{m}$	7.09	
Mean Low $\bar{m}$	3.81	$\underline{t}$ 5.05*
S^2 High	7.65	
S^2 Low	5.84	
S_d	.65	

Critical value of $\underline{t}$ - .01 (one-tailed), 62df, 2.39

*$p < .01$

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